

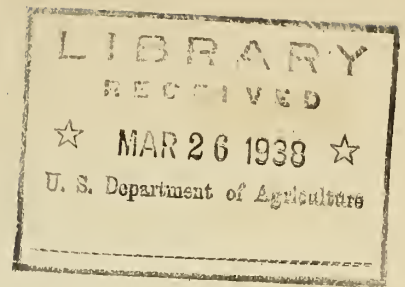
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HOUSEHOLD CALENDAR

Egg Whites Make Sponge Cakes Light



Miss Ruth Van Deman, Bureau of Home Economics, and Mr. Morse Salisbury, Office of Information, broadcast Thursday, March 17, 1938, in the Department of Agriculture period of the National Farm and Home Hour, by the National Broadcasting Company and a network of 93 associate radio stations.

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MORSE SALISBURY:

Here we are in Washington with our ears filled with lilting Irish tunes, thanks to you, Everett Mitchell, and the Homesteaders out there in Chicago. And here's Ruth Van Deman a-comin' up to the microphone on St. Patrick's day in the mornin'. And by the twinkle in her eye I think she must have something very light and gay on her docket.

RUTH VAN DEMAN:

Well, if you call egg whites, sponge cakes, angel food, light and gay.

SALISBURY:

Certainly, egg whites to make spong cakes light -

VAN DEMAN:

Marvelous! Morse, you must be feeling a touch of spring yourself.

SALISBURY:

Oh, Spring or no Spring, I could write a sonnet to a sponge cake.

VAN DEMAN:

Go ahead, dash one off.

SALISBURY:

"Light as the down of the thistle
Gold -- as -- the -- the -- the --

ANNOUNCER:

Dandelion, Morse!

SALISBURY:

Ow-no, Bryson, dandelions aren't poetic.

ANNOUNCER:

Daffodil then - daffy downdilly -

VAN DEMAN:

Well, while you two are writing the sonnet, I'll go ahead with a little science. Remember this letter, Mr. Salisbury. I think it came to you --

(over)

SALISBURY:

Let me see. Yes, I remember.

VAN DEMAN:

I'm making it my golden text today.

SALISBURY:

(Reading) "Will you please ask Miss Van Deman how to make successful sponge cake, angel food, and other things with egg whites. I am considered a good cook, but eggs just won't whip for me. Can a fresh egg have too watery a white? Can the egg be too cold?" Interesting questions, Ruth.

VAN DEMAN:

Very. And it happens that Dr. Florance King and some of our other food people are working on egg whites right now, trying to find the answers to questions just like those.

SALISBURY:

That the cooperative study with the poultry people?

VAN DEMAN:

Yes, the eggs come in from the experimental flocks at Beltsville the day they're laid. And they make them right up into cakes.

SALISBURY:

Sponge cake?

VAN DEMAN:

Angel food.

SALISBURY:

Angel food.

VAN DEMAN:

They took angel food for their test cake because it uses so much egg white in proportion to the flour and sugar. They find it a very good index of the leavening power of the egg whites.

SALISBURY:

Any of those eggs have watery whites?

VAN DEMAN:

Yes. Quite a few. But don't ask me what makes them that way.

SALISBURY:

No. I understand even the poultry scientists can't answer that one yet.

VAN DEMAN:

And Doctor King isn't anywhere near through her experiments yet either.

SALISBURY:

Are they finding that the watery egg whites won't beat up?

VAN DEMAN:

Oh, no. They can beat them up all right. In fact they whip up more quickly than the thick jelly-like whites. And they make a larger quantity

VAN DEMAN: (continued)

of foam. But the foam doesn't stand up so well. The film of egg white, coagulated protein it is, around the tiny air bubbles isn't so strong.

SALISBURY:

And the cake?

VAN DEMAN:

I can see, Wallace. Your mind's right on the cake.

SALISBURY:

Certainly--the ultimate objective. It's the end product, isn't it?

VAN DEMAN:

Very much so. Well, the cake often isn't as good as it might be. It's not so tender or so large as angel cake made with very firm, thick whites.---And on that question of can egg whites be too cold to beat well---

SALISBURY:

Yes, what about that?

VAN DEMAN:

Doctor King says they're getting best results when the eggs are at room temperature. If they're very cold they don't beat up well. That is, they don't beat up quickly and they don't make a large quantity of foam. It seems it's all a question of surface tension---

SALISBURY:

Surface tension of the egg white.

VAN DEMAN:

Yes, when the egg white's very cold, it's firmer.

SALISBURY:

Doesn't stretch so readily to hold in the air bubbles ---

VAN DEMAN:

That seems to be it. And of course there should be no drops of egg yolk in with the whites when they're whipped. The yolk has fat in it, and fat in any form will keep egg white from beating up stiff and fluffy.

SALISBURY:

Surface tension again?

VAN DEMAN:

Or something else deep in physical chemistry. And here's another practical point. If you add salt and acid, in the form of cream of tartar or lemon juice, to egg whites as you're beating them, the foam holds up better and there's more of it. The acid makes the protein in the egg white more elastic.

SALISBURY:

Gives it more stretch.

VAN DEMAN:

That's right.

SALISBURY:

Well, do you put the acid and salt in at the same time?

VAN DEMAN:

No. The salt before you start to beat. And the cream of tartar or lemon juice just after the egg whites reach the frothy stage. Then keep on beating until the foam starts to peak when you lift the egg beater from it. That is, if you're using the meringue method of making angel food.

SALISBURY:

The meringue method. Ruth, this is getting pretty deep for me. I think I'd better retreat to the corner ---

VAN DEMAN:

Oh, no. Stand by. This isn't complicated. There are just two standard methods of mixing angel food cakes. The meringue method generally gives better results.

SALISBURY:

Well, if it's results you're talking about again ---

VAN DEMAN:

I'm sorry I haven't any visible results to offer today. But here's our baking bulletin. Maybe you'd like to take it home and experiment yourself.

SALISBURY:

I'll take it home.

VAN DEMAN:

And if you turn to page 26, you'll find ---

SALISBURY:

Page twenty -- six.

VAN DEMAN:

Sponge cake.

SALISBURY:

Plain sponge cake and variations - Sunshine cake ---

VAN DEMAN:

And over there on the next page - Angel food ---

SALISBURY:

Angel food and variations.

VAN DEMAN:

That tells all about the meringue method.

SALISBURY:

Ah, yes.

VAN DEMAN:

Better underscore that part about folding the flour and sugar into the egg whites gently.

SALISBURY:

Folding?

VAN DEMAN:

Yes, you don't want to stir egg whites any more than you can help after you get them beaten full of air. You use a wire whisk and fold the dry ingredients in with an over-and-over motion as carefully as possible. So as not to break the air bubbles and let the air out --

SALISBURY:

Needs a light touch, eh?

VAN DEMAN:

The lighter the better. And underscore those oven temperatures, too. Cakes with a lot of egg white need a very moderate oven.

SALISBURY:

What you mean moderate?

VAN DEMAN:

About 325 degrees. Fahrenheit of course. That allows the air bubbles to expand and gives the film of cake batter around them a chance to become firm so the cake has that light fluffy texture.

SALISBURY:

"As light as the down of the thistle."

VAN DEMAN:

Perfect, Morse. Write your sonnet out and I'll read it on the broadcast next week.

SALISBURY:

Well, when I write it, I'll let you read it.

VAN DEMAN:

That's a promise.

SALISBURY:

I suppose you really believe it's a threat. And we'll be expecting you back next week at this same time with more science.

VAN DEMAN:

Yes, about planning kitchens maybe.

KADDERLY:

Good. And now I'd just like to mention again that this bulletin Miss Van Deman referred to, with the recipes for sponge cake, and angel food, and all these cakes made with egg white, is Farmers' Bulletin 1775. The full title is Homemade Bread, Cake, and Pastry. And it's a regular compendium of practical facts for home bakers. And it's free to anyone who sends a card to the Bureau of Home Economics at the United States Department of Agriculture in Washington. Just ask for Farmers' Bulletin 1775 - Homemade Bread, Cake, and Pastry.

